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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/420,720	10/20/1999	JENS-UWE JURGENSEN	450117-02106	3195

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EXAMINER

NGUYEN, DUNG X

ART UNIT	PAPER NUMBER
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2631

DATE MAILED: 04/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/420,720

Applicant(s)

JURGENSEN ET AL.

Examiner

Dung X Nguyen

Art Unit

2631



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 October 1999.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 5, 8, 9, and 10 - 14 is/are rejected.
- 7) ☒ Claim(s) 6, 7, 15 and 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2</u> . | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claim 1 – 5, 8, and 10 – 14 are rejected** under 35 U.S.C. 102(b) as being anticipated by Zehavi (US patent # 5,414,728).

Regarding claim 1, Zehavi discloses:

- At least one dispreading unit for dispreading an input data bitstream respectively with the common spreading code (column 11, lines 31 – 33), and
- A set of descrambling units per dispreading unit, respectively descrambling unit being supplied with the output signal of one dispreading unit (column 15, lines 2 – 23).

Regarding claim 2, Zehavi further discloses that a plurality of dispreading is provided and input data are supplied to the dispreading units by means of a delay line (column 11, lines 31 – 33 and column 12, lines 13 – 34).

Regarding claim 3, Zehavi further discloses that a channel estimator for generating channel estimation values (column 11, lines 45 – 58).

Regarding claim 4, Zehavi further discloses that correlator for supplying correlation based data both to the input of the receiver and the channel estimator (column 11, lines 33 – 44).

Regarding claim 5, Zehavi further discloses that multipliers for multiplying data based on the output of a descrambling unit with the channel estimation values supplied from the channel estimator (column 11, line 61 to column 12, line 12).

Regarding claim 8, Zehavi further discloses (figure 6) includes receiver 312.

Regarding claim 10, the limitations are analyzed in the same manner set forth as claim 1.

Regarding claim 11, the limitations are analyzed in the same manner set forth as claim 2.

Regarding claim 12, the limitations are analyzed in the same manner set forth as claim 3.

Regarding claim 13, the limitations are analyzed in the same manner set forth as claim 4.

Regarding claim 14, the limitations are analyzed in the same manner set forth as claim 5.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 9 rejected under 35 U.S.C. 103(a) as being unpatentable over Zehavi (US patent # 5,414,728).

Zehavi discloses a CDMA modulation system (column 1, lines 55 – 57). Zehavi differs from the instant claimed invention that it does not expressly state that the CDMA transmission system is a mobile station. However, the mobile station is just an environment to carry out of the CDMA modulation system. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to implement Zehavi in an environment such as a mobile station.

Allowable Subject Matter

5. **Claims 6, 7, 15, and 16 are objected to** as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Tanaka et al. (U.S. Patent No. 6,493,379 B1) discloses the arrival direction estimation method using an array antenna and DS-DCMA receiver unit using the method.

Dent (U.S. Patent No. 5,151,919) discloses the CDMA subtractive demodulation.

Contact Information

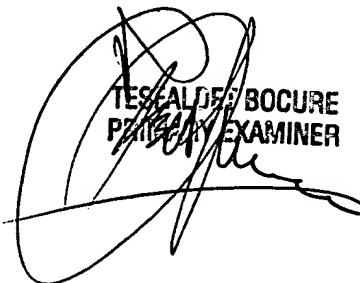
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung X. Nguyen whose telephone number is (703) 305-4892. The examiner can normally be reached on Monday through Friday from 9:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Chi Pham can be reached on (703) 305-4378. The fax number for this group is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

DXN

April 10, 2003


Tessa L. Bocure
Primary Examiner